

# Houston ISD A<sup>2</sup>TeaMS

## Middle School Mathematics

3<sup>rd</sup>/4<sup>th</sup> Six-Weeks HAPG Study      October 7, 2009

Time	Activity	Materials
12:30 - 1:15	Vertical look at the TEKS for Objective 2 <ul style="list-style-type: none"> <li>• Participants sit first by grade level to complete their column of the Objective 2 study template</li> <li>• Re-group to sit by vertical teams to share and complete the other 2 columns</li> <li>• Focus conversations on what is similar/ different at each grade level. How does a concept grow if it appears at each grade level?</li> <li>• Whole-group debrief: each vertical team shares 1 “A-ha!”</li> </ul>	<ul style="list-style-type: none"> <li>• Objective 2 study template</li> <li>• Copies of 6-8 TEKS (2009 revisions)</li> </ul>
1:15 - 2:00	Arithmetic sequences with models <ul style="list-style-type: none"> <li>• Complete Pattern A together. BUILD the models!</li> <li>• Complete Patterns B-C with a partner</li> <li>• Look for similarities/differences</li> <li>• Focus discussion on building conceptual understanding and MTC Framework (progression from concrete to organizing to abstract generalizations)</li> <li>• Implications for high-achieving students: NCTM research on communication needs</li> <li>• Try Pattern D. What happens? Why does it seem to not work? What is the “fix”?</li> <li>• Try Pattern E. What happens? Why does it seem to not work? What is the “fix”?</li> <li>• Will models work for subtraction rules? Try <math>2n - 1</math>. How does subtraction appear in the model?</li> </ul>	<ul style="list-style-type: none"> <li>• 2-color counters</li> <li>• Copies of Patterns A-E</li> </ul>
2:00 - 2:45	Create a 5E lesson on Arithmetic Sequences using resources listed in HAPG <ul style="list-style-type: none"> <li>• Participants will sit with a horizontal planning team to complete the 5E lesson planning template for a lesson on arithmetic sequences</li> <li>• Laptops will be provided</li> <li>• Electronic copies of HAPGs with live hyperlinks to available resources</li> <li>• Electronic copies of 5E lesson plan template with portions pre-completed</li> <li>• Embed literacy strategies from HAPG and Dinah Zike strategies into Explain</li> </ul> Possible roles: <b>recorder</b> (the person on the laptop); <b>researcher</b> (searching through possible lesson resources); <b>manager</b> (ensuring all components are completed); <b>vertical focus</b> (keeping us on target to build on what happened last year and ensuring we’re setting a foundation for what will happen next year); <b>horizontal focus</b> (making sure we’re building on this year’s prior experiences and meeting the intent of our grade level TEKS)	<ul style="list-style-type: none"> <li>• Laptops (at least 1 per grade level team)</li> <li>• Electronic copies of 5E lesson planning template</li> <li>• Electronic access to HAPGs with links</li> </ul>
2:45 - 3:00	Whole group debrief <ul style="list-style-type: none"> <li>• In 5 mins or less: Share the lesson your group created</li> <li>• How is the content of your lesson unique to your grade level?</li> <li>• Each member shares 1 phase so everybody presents something</li> <li>• As a group is presenting, listeners write warm/cool feedback on post-it notes</li> <li>• Post-its attached to each team’s chart paper and passed to presenting team</li> </ul>	<ul style="list-style-type: none"> <li>• Post it notes in 2 colors (warm/cool)</li> <li>• Chart paper per team (to collect post-its)</li> </ul>
3:00 - 3:20	Reflection <ul style="list-style-type: none"> <li>• Review your feedback (on your post-its)</li> <li>• Make any necessary revisions to lesson plan</li> </ul>	
3:20-3:30	Evaluations and Homework <ul style="list-style-type: none"> <li>• Explain that we will complete the TEKS study of Objective 3 online through Wikispace discussion board</li> </ul>	<ul style="list-style-type: none"> <li>• Paper copies of evaluations for HISD and Region 4</li> </ul>